

REMARKS

Reconsideration of this application is requested.

Claim 1 has been amended to better define the applicants' invention. The amendments to claim 1 include addition thereto of the features of claims 3, 4, 6 and 7. As a consequence, claims 3, 4 and 7 have been canceled with claim 6 appropriately amended to avoid redundancy.

The claims as amended are thought to be in acceptable form and patentably distinguished from the prior art relied on by the Examiner. Accordingly, favorable reconsideration with allowance is requested.

More specifically, claims 2, 6, 8-11, 13, 15 and 16 have been amended, taking into account the Examiner's Section 112, 2nd ¶ rejection as set out on pages 2-3 of the action. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The Examiner is also respectfully requested to reconsider the Section 102(b) rejection of claims 1-4, 8-14 and 16-19 as anticipated by Birch et al (U.S. 2003/0180340). This published application has a common assignee and a common inventor with the present application and its equivalent WO 02/09663 is acknowledged in the applicants' specification (¶ bridging pages 1-2).

While the applicants do not agree with the basis for the Examiner's Section 102(b) rejection, the amendment of claim 1 to include features of claims 6 and 7, which were not included in the rejection, should moot the rejection and obviate the need to discuss the rejection in any detail.

As for the Examiner's Section 103(a) rejection of claims 5-7 and 15 (now claims 1, 5 and 15) as unpatentable over Birch et al. (U.S. 2003/0180340), the applicants respectfully submit that their claims, particularly as claim 1 has been amended, define subject matter which is unobvious from, and patentable over, the disclosure of the published application. Accordingly, reconsideration and withdrawal of the Section 103(a) rejection, with allowance of all of the applicants' claims, are requested.

As evident from claim 1, as amended, the applicants' invention is directed to the production of particles comprising at least one core of swellable organic polymer core material containing perfume absorbed therein. According to the applicants' invention, a slurry of encapsulating material, aqueous solution, core material and perfume is heated

to reduce the water content thereof so as to obtain a molten or rubbery mass with at least part of the heating being effected in a pre-heater, followed by extrusion of the molten or rubbery mass through a die. It is an essential of the invention to carry out the extrusion using an extruder having an internal diameter greater than about 45 mm, the extruder having all conveying screw profiles and having no mixing paddles or kneading elements in the screw profile.

The cited Birch et al. reference, in its most relevant respect, discloses (Example 5) the production of pellets using a laboratory scale extruder having an internal diameter of 24 mm and not using a pre-heater to heat the slurry to reduce the water content thereof prior to passage to the extruder.

In contrast, the present invention is concerned with production of encapsulated perfume particles on a commercial scale, particularly particles including swellable organic polymer core materials. In order to achieve commercially useful rates of production, it is necessary to use a larger diameter extruder, having an internal diameter of greater than 45 mm. However, particular problems arise in this type of situation.

More specifically, the organic polymer core materials are delicate and prone to physical damage, particularly when subjected to sheer forces, as explained in the second paragraph on page 4 of the present specification. This means it is not possible to use extruders having mixing paddles or kneading elements. Instead, it is necessary to use a low sheer extruder having only conveying screw profiles. However, when using a larger diameter low sheer extruder, problems arise in controlling the temperature of the slurry within the extruder to reduce the water content to produce a molten or rubbery mass suitable for extrusion in accordance with the invention. These problems do not arise when using a laboratory scale extruder. This is discussed in the paragraph bridging pages 4 and 5, the second, third and fourth paragraphs on page 5 and the first paragraph on page 6 of the present application.

The applicants have found that the only way to achieve satisfactory control of temperature is by use of a pre-heater to heat the slurry prior to delivery to the extruder.

Although satisfactory particles are achieved by heating the slurry within the small diameter extruder as used in Example 5 of Birch et al., the same approach of simply heating the slurry within the extruder will not work with a larger diameter extruder. This is illustrated by comparative Example 3 of the present application, which uses an extruder with an internal diameter of 65 mm and no pre-heater, and failed to give useful


particles. There is nothing in the Examiner's reference suggesting the problem of concern to the applicants or the applicants' solution thereof.

Claim 1, as amended, is thought to now clearly and unequivocally define the applicants' invention and distinguish it from Birch et al. In particular, there is no suggestion in the art that a problem will arise with temperature control when using larger diameter extruders, and that this problem can be successfully dealt with by use of a pre-heater as called for in the applicants' claims.

Consistent with the above, the applicants submit that claim 1, and the other claims pending herein, all of which depend from claim 1, define subject matter which is new and unobvious and, therefore, patentable. Accordingly, the application, as amended, is thought to be in condition for allowance and such action is requested.

Respectfully submitted,

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